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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,952	03/25/2004	Nelson Diaz	16274.179	6355
22913	7590 08/24	EXAMINER		IINER
	AN NYDEGGER	VAN ROY, TOD THOMAS		
	RKMAN NYDEGO OUTH TEMPLE	ART UNIT	PAPER NUMBER	
1000 EAGL	E GATE TOWER	2828		
SALT LAKE CITY, UT 84111			DATE MAILED: 08/24/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)					
	10/808,952	DIAZ, NELSON					
Office Action Summary	Examiner	Art Unit					
	Tod T. Van Roy	2828					
The MAILING DATE of this communication app							
Period for Reply	(10.0ET TO EVEIDE AMONTH)	C) OD TUBELY (20) DAYO					
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	lely filed the mailing date of this communication. D (35 U.S.C. § 133).					
Status							
1) Responsive to communication(s) filed on 19 Ju	<u>ine 2006</u> .						
2a) ☐ This action is <b>FINAL</b> . 2b) ☒ This	This action is FINAL. 2b)⊠ This action is non-final.						
	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
closed in accordance with the practice under E	x parte Quayle, 1935 C.D. 11, 45	63 O.G. 213.					
Disposition of Claims							
4)⊠ Claim(s) <u>9-14 and 22-28</u> is/are pending in the a	application.						
4a) Of the above claim(s) is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.							
6)⊠ Claim(s) <u>9-14 and 22-28</u> is/are rejected.	6)⊠ Claim(s) <u>9-14 and 22-28</u> is/are rejected.						
7) Claim(s) is/are objected to.							
8) Claim(s) are subject to restriction and/or	relection requirement.						
Application Papers							
9)⊠ The specification is objected to by the Examine	r.						
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.							
Applicant may not request that any objection to the	drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).					
Replacement drawing sheet(s) including the correct							
11)☐ The oath or declaration is objected to by the Ex	aminer. Note the attached Office	Action or form PTO-152.					
Priority under 35 U.S.C. § 119							
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:	priority under 35 U.S.C. § 119(a)	-(d) or (f).					
1. Certified copies of the priority documents	s have been received.						
2. Certified copies of the priority documents	s have been received in Application	on No					
<ol><li>Copies of the certified copies of the prior</li></ol>	ity documents have been receive	ed in this National Stage					
application from the International Bureau							
* See the attached detailed Office action for a list	of the certified copies not receive	d.					
Attachment(s)	<b></b>						
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> </ol>	4) Interview Summary Paper No(s)/Mail Da						
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date		atent Application (PTO-152)					

#### **DETAILED ACTION**

# Specification

The disclosure is objected to because of the following informalities:

Pages 7 and 8 list the PNP transistors found in figure 4, and incorrectly list #350 instead of #370.

Appropriate correction is required.

## Response to Amendment

The examiner acknowledges the cancellation of claims 1-8 and 15-21.

## Response to Arguments

Applicant's arguments, see Remarks, filed 06/19/2006, with respect to the rejection(s) of claim(s) 9-14 and 22-28 under USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

The examiner believes that the motivation for the previous combination of references would not have necessarily been obvious to one of ordinary skill in the art, and therefor the previous rejections are withdrawn. Please see below for an updated rejection to these claims.

# Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9-14 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diaz in view of Riaziat et al. (US 2003/0138008).

With respect to claim 9, Diaz teaches a laser driver comprising: a PNP transistor current source (fig.13a upper left, also a current mirror), an inductor coupled to the PNP transistor current source (fig.13a #809); a switch coupled to the inductor (fig.13a #838, NPN); and a current sink coupled to the switch (fig.13a #834), wherein the PNP transistor current source supplies a first current to a laser if the switch is closed and a second current to the laser if the switch is open (as this circuit is the same as the claim limitations, and fig.4 of the applicant's specification, it is inherent that the operation would be the same) and wherein the PNP transistor current source, inductor, switch, and current sink are on a single semiconductor chip ([0030], stating the laser driver may be implemented on a single chip); including a second transistor (NPN) switch (fig.13a #830). Diaz does not teach an additional PNP current source and inductor to be coupled to the second switch, or the laser diode to be driven differentially. Riaziat teaches a laser driver which uses a differentially driven laser diode ([0005]). It would have been

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obvious to one of ordinary skill in the art at the time of the invention to couple an additional identical PNP current mirror and inductor of Diaz (obvious to duplicate existing parts, see MPEP – 2144.04 VI B – duplication of parts) to the second switch to form the second, identical, transistor driving arm to allow for differential driving of the laser diode (a well known configuration, see Riaziat [0005]) allowing for reduction of parasitics when used in conjunction with transistor outline packaging (Riaziat, [0005]).

Claim 10 is rejected for the same reasons as claim 9 above.

With respect to claim 11, Diaz further teaches the switch to open and close in response to a data signal (fig.13a through input #832, also inherent that a switch would open and close in response to a data signal).

With respect to claim 12, Diaz further teaches that when the switch is closed to drive the laser to output a logic low (only bias applied, logic low) optical signal and the switch is opened to drive the laser to output logic high (both currents applied, logic high).

With respect to claims 13, Diaz further teaches the inductor size influences the frequency response of the PNP current source, and reduces intersymbol interference ([0088-90], also inherent as the circuit and inductor placement are the same as the instant invention).

Claim 14 is rejected for the same reasons as claim 9 above.

With respect to claims 22-28, Diaz and Riaziat teach the laser driver as outlined in the rejection to claim 9, and Diaz further teaches the method of operating the laser

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driver as in the rejection to claims 15-21, which after the addition of the second PNP current mirror and inductor (with similar operation), would read on claims 22-28.

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod T. Van Roy whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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